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No. 21.



Bee-Keeping for Women.

BY MRS. L. C. AXTELL.

Women living upon a farm, or in the outskirts of a village, would find it a pleasure, and a profit, by keeping one or more colonies of bees, especially if they desire to have a few dollars all their own. Even though they may have their hands already full of other work, the little time that it takes to care for bees out-of-doors would give renewed strength and energy, so that the time taken for the bees would not be missed.

BEES AND SUNSHINE.—In all cool and cloudy or rainy weather bees ought not be disturbed, so that we are not obliged to be out-of-doors caring for bees in weather that would be injurious to our health. When the bees fly freely, and the wind is not blowing hard, any time during the warm part of the day is a good time to work with them. I prefer not before 9 o'clock in the forenoon, or after 4 in the afternoon, as I find it a little difficult to see the interior of the hive with my bee-hat on, owing to the sun being low down in the horizon.

BEE-WORK IS NOT HARD WORK—at least I do not find it nearly so tiresome as most out-of-door work, or even common housework; washing, ironing, sweeping, mopping, I find much more tiresome. I suppose it is something as we take it; if we like to do anything, it is more easily done. Of course, if we are already tired out before we go to work with the bees, we will grow more tired, and yet not so much more tired as if we had continued at work in the house, as it is a recreation to be out-of-doors in the glorious sunshine after being shut up in the house the most of the time perhaps for days. To feel and breathe the pure air, and hear the birds sing and the busy hum of the bee, and the eye to rest upon the green grass and trees, and bright flowers, and the beautiful blue sky, is restful, even to the tired body, if not continued too long.

THE FEAR OF STINGS I think prevents many from not liking the work, and yet, when properly protected with a bee-hat or face-veil, and working only in the warm part of the day, and never when cloudy, rainy or cold, and with the use of a good smoker, one need rarely be stung, if we immediately extract the sting by scraping it off (not pinching it, as that squeezes the poison-sac, and causes more poison to enter the flesh), and then pay no attention to the pain, work all the

harder for a few minutes, most people will soon get so they do not care much if they are stung; but if we stop work and nurse the sting, and think about it, it seems almost unbearable; the mind being upon it makes it many times harder to bear.

BEES FOR YOUNG WOMEN would be a delightful employment, it seems to me. They could then remain at home where they could be helpful to their parents, and at the same time be making something for themselves. They, nor any one, should attempt to work with them without learning how. A dollar spent for a good book on bee-culture will teach any one a great deal. Possibly bees in the old box-hive, kept after the let-alone fashion, might be profitable, but I think it pays much better to read up and find out their needs, and get the gentle Italian bees, and give them a chance to do their best, by giving them a warm, movable-frame hive where their wants can all be known and be supplied from time to time.

Women can be just as successful with bees as men, and that is one kind of work they receive just as much pay for as do men. When we take our honey to market a pound of



Mrs. L. C. Artell, Roseville, Ill.

honey that a woman gets from her bees brings just as much as her husband's or brother's honey.

HONEY ALWAYS BRINGS A PAYING PRICE, at least we have always thought so. When there has been a great deal

of honey in one year, the price gets lower, but we can afford to sell lower because we have more to sell.

There is no article of food that looks more attractive upon our table than honey in the comb, and it is always ready for immediate use—we do not have to prepare it and cook it—it is always ready.

Roseville, Ill.



Bee-Keepers' Societies—Amalgamation, Programs, Etc.

BY PROF. A. J. COOK.

Perhaps the most urgent reason given for the amalgamation of the National Bee-Keepers' Union and the North American Bee-Keepers' Association is the fact that many regard the North American as a sort of a failure. This argument does not appeal to me at all. I have never regarded the American in any such light. I have attended several meetings of this society, notably the ones at Cleveland, Chicago, Toronto, Detroit, Cincinnati, Lexington and Chicago, and I regarded them as very important factors in the progress of apiculture in our country. Of course, we cannot expect a very general attendance upon such meetings, for our country is too large, and the time and expense required in going, for instance, from California to Toronto, is quite beyond the means of most of our bee-keepers. Thus, it is that the attendance will always be in the main local, though, if I may judge by the meetings that I have attended, there will always be a good sprinkling of our best apiarists from many of the States.

There are also papers from other apiarists, men of marked ability and high standing among bee-keepers, which will be sent to the convention to be read, although the writers are unable to be present. Thus, each of these meetings becomes a matter of great interest and importance to all our bee-keepers. The best of knowledge and method that our country knows is very apt to come out at such gatherings. The discussions are apt to be of the highest order, and the social feature of the meetings will do very much to strengthen the fraternal feeling without which no industry can reach to the best attainment. The editors of the various bee-papers will always be on hand, and thus those who are so unfortunate as to be unable to attend will get through the bee-papers all that is new and important in the bee-keeping art.

It seems to me that the meetings should be migratory, and I think the past history of this society has been very fortunate in this respect, so that each State, where there is a strong desire for the meetings, should, in its turn, have the benefits accruing from the meeting of the Association in its limits. I would never have the Association go where there was not a strong invitation, and a promise that all local expenses, such as hall, local advertising, etc., should be borne by the State or town where the meeting is held. We may use sarcastic terms regarding the attendance and influence of the meetings of the past; but I feel very sure that a close study would show that the North American Bee-Keepers' Association has been a tremendous factor in the rapid development which has characterized the bee-keeping of America.

I have had a large experience in organizing and carrying out such meetings as the ones in question, and after all the study and thought that I have been able to give, I would like to suggest what is my ideal in regard to State and National associations:

In the first place, as already suggested, I would stoutly urge that all places be fairly used, that is, that the meetings be migratory, and that each section in the State or country receive its share of attention. I would, however, never go to a region where there was not sufficient interest to secure an urgent appeal for the meeting. I would also have prepared in advance a strong, meaty program, with papers from the strongest and most successful men in the State or country.

These papers should be from men whose very names would awaken interest and secure a large attendance. I would have these papers short and to the point, and, best of all, each paper from a specialist in the line of thought which the paper takes. I know that in this respect my recommendation would be criticised by some of our very brightest and wisest bee-keepers, but I still believe I am right. I do not believe any meeting can do the best work without such a program. All experience of every kind of society in the past sustains this position, and as we stop and give the matter thought, it is easy to understand why this is so. It is expensive to go off perhaps for miles, and possibly hundreds of miles, to attend the meeting, and few of us, especially in these hard times, will undertake such a journey unless we have some promise of a rich feast for our labor and pains.

A program wisely prepared is just such a promise. Let me see a program where it was announced that Messrs. Hall, McKnight and Pringle, of Ontario; Messrs. Doolittle, Hetherington and Root, of New York; Messrs. Bingham, Hutchinson, Taylor and Heddon, of Michigan; Messrs. Root, Mason and Tinker, of Ohio; Messrs. Miller, Green and Stone, of Illinois, etc., were to be present, and give papers on the subjects which they had nearest to heart, and I would almost go clear from California to Boston to be present at the meeting.

Again, few of us have the power to give extempore our views upon the subjects most familiar to us, in brief, terse form. But in the quiet of our study at home we can do just that thing, and thus we can save the time of the convention, every minute of which is precious.

After each subject is presented by the person appointed upon the program, then there is a chance for full discussion by any one present who can throw additional light upon it. If it is understood that 10 or 15 minutes is all that will be given to any speaker in introducing a subject, there need be nothing prosy or tedious because of a pre-arranged program. I undertake to say that there is very much less danger of waste of time from long-winded articles, if arranged as suggested above, than from waiting for some one to introduce a subject, or to present it briefly and pointedly where no program has been provided.

I have often thought I would like to have Dr. Miller present at some of our California Farmers' Institutes (at each of which we have a strong program arranged in advance), that he might see what could be secured at a meeting in which we have a program and carefully prepared papers, but brief ones, presented at each session. I would never have more than two or three papers at each session, and I would never have a paper to exceed 15 minutes.

We urge all to take no more than 10 minutes in the introduction of any subject brought before the meeting. The objection that this limits the subjects for discussion, and perhaps excludes topics which are most desired, is easily removed by a question-box, which is open for any question that any one may wish to ask. This question-box is opened at the beginning of each session, while people are coming in, and if it is presided over by one well qualified, it can be made so racy that there will be few tardy ones to disturb the meeting by their late entrance. We find the question-box an important aid in making our institutes in the highest degree instructive and profitable.

Claremont, Calif.



A New Binder for holding a year's numbers of the American Bee Journal, we propose to mail, postpaid, to every subscriber who sends us 15 cents. It is called "The Wood Binder," is patented, and is an entirely new and very simple arrangement. Full printed directions accompany each Binder. Every reader should get it, and preserve the copies of the Bee Journal as fast as they are received. They are invaluable for reference, and at the low price of the Binder you can afford to get it yearly.

Adulteration—More Action and Less Talk.

BY ED JOLLEY.

Editor Root says in *Gleanings*, that adulteration of honey seems to be on the increase, owing to the apathy and hush-up policy of bee-keepers in general. Now this is a question with two sides to it. There is doubtless a great deal of honey adulterated, and probably it is increasing, but I am very loth to attribute the cause of it to any hush-up policy on the part of the bee-keepers. I am more inclined to think that the abortive howls of a few over-zealous bee-keepers has not only called public attention to the fact that adulteration of honey is rife—and thereby placed the ban of suspicion on the genuine article—but they have shown those who are unprincipled enough to adulterate honey, how utterly helpless we are, under our present laws, to protect ourselves.

Now, I am as bitter against the adulteration of our product as any one can be, but I think this clash and clatter, before we have secured laws that will help us, is premature, and will not avail us anything; and is quite as injurious to bee-keepers as the adulteration itself. It would serve our purpose far better for the bee-keepers of each State to try to impress upon their different representatives our need of laws that will protect our industry. I have no doubt but what the united efforts of the bee-keepers would be successful. This is the same road the dairymen had to travel to secure laws against the adulteration of their product. A few years ago the oleomargarine makers were making things look pretty blue for them, but instead of rushing into print with such statements as—"half the butter on the market is oleo," and "imitation is so perfect that an expert can hardly detect it," etc.—they organized and succeeded in having the business pretty generally out-lawed. Now, if we had laws so that we could punish the adulterators, there might be some excuse for making a fuss, but, as it is, I think it would be better to talk less and act more.

Franklin, Pa.



Transferring Bees—How Not to Do It.

BY EMERSON T. ABBOTT.

As this is the season when bees are usually transferred, a few words on this subject may not be out of place. I am frequently asked by the inexperienced how to transfer bees from old box-hives to modern hives, and I now make it a point to say, "Do not do it." As this answer is not in accordance with the usual teaching on this subject, it may not be amiss for me to give my reasons for the "faith that is in me."

As I now see things, bees are always transferred at a loss, and in most cases I think the beginner makes a mistake if he undertakes it. With the little experience which he has had, he is almost sure to make a bungling job of it. Neither do I think it will pay, even though the operator is an expert. The interference with their work, and the loss of brood that is sure to follow from transferring a colony of bees at this season of the year, is sure to amount to more than the benefits to be derived from the process.

Do not understand me to mean that there are no benefits to be derived from having a colony of bees in a good, modern hive, as there can be no question about this, in my mind. The advantages to the bee-keeper of the movable-frame hive over any box-hive are very great, but the loss incurred in making the change is what has led me to devise some other method of securing the end desired. There was a time when I believed in and practiced transferring, but now, if a man should come to me and say, "I have 10 colonies of bees in old box-hives, and I want to try the modern hive, as I get nothing out of my bees as they are managed at present," I would advise him to proceed as follows:

Leave the bees where they are, but crowd them down into

the lower part of the hive and let them remain there until they swarm. In the meantime, get 10 good hanging-frame hives, and fit them up with foundation in the brood-frames, and starters in the sections. The usual charge in this country for transferring is \$1.00, and this will more than pay for the foundation. When the bees swarm, be on hand and set one of the new hives on the stand where the box-hive from which the swarm has issued stands, first having moved the old hive back a few feet, with the entrance turned the opposite way from what it has been. Hive the swarm in the new hive, and let the old hive remain where it is until the next day. Then turn it around and set it close up beside the new hive, with the entrance the same way. Leave it here about two weeks and then move it to some other part of the yard, and let all of the flying bees go to the new hive. By following out these instructions, he will soon have 10 strong colonies of bees in modern hives, and I think he will get more than twice as much honey from the 10 colonies as he would if he had gone to the trouble of transferring them, or the expense of having it done.

He can repeat this process until he has all the bees he wants in modern hives, and then he can dispose of his bees in the box-hives to some one who wants to go through the same process which he has in getting a start in bees, or he can keep them for a "nest egg" some spring after a long, hard winter when the bees all die off in the modern hives; for there is no question in my mind but what bees winter better, taking one winter with another, in the old-fashioned, tall box-hives than they do in our modern hives with shallow frames. If it were not for the other benefits which more than overbalance the chance of loss, I would not use a modern hive at all. The problem in modern bee-keeping seems to be to get the bees through the winter strong and healthy.

If one does transfer his bees, I trust he will not use thorns, wire nails, or sticks to fasten the combs in the frames, as is recommended in most bee-books, and also in the Government Bulletin No. 1, just issued. Wrapping-twine is just as good, and is preferable in some respects, and is much more easily put on and taken off. In fact, the bees will take it off themselves, if given time enough, but I prefer cutting it off with a sharp knife after a day or two.

St. Joseph, Mo.



Sweet Clover in the South—Grown as Regular Farm Crop.

BY M. M. BALDRIDGE.

The correspondence below will, I think, explain itself as the reader proceeds. As will be seen, the letters were written by a man who has had a long and extensive experience in growing sweet clover for stock and for improving the soil. Now, as this correspondence was not intended for the public eye, the reader will please excuse the omission of the writer's name and postoffice address, and be content with simply the facts presented. I will give dates, for they seem to be necessary:

Mississippi, Oct. 26, 1894.

I sow about 50 acres of sweet clover every spring, and any time between the 1st of February and the 15th of April. As a rule, I plow and harrow the ground before sowing the seed. I then sow about 15 pounds of unhulled seed per acre, and do not cover it at all. I have never failed to get a good stand. Some times I sow the seed upon land not plowed at all, and even then I seldom fail to secure a good "catch." It will grow on Bermuda or Johnson grass sod, and it is, in my opinion, a better plant for enriching the land than cow-pea vines or red clover.

Sweet clover must be a good honey-plant, for my fields are alive with bees when the plant is in blossom. I cannot imagine where the bees come from, for I keep none, and they seem to be very scarce in my neighborhood. They must come, so it seems to me, a distance of from 4 to 5 miles. I know but little about the habits of bees, for I never had the least

desire to handle them. I think, however, that one of their chief characteristics must be to sting, for they seldom fail to give me a dose whenever I come in contact with them.

When sweet clover is grown for honey, and a crop of blooming plants is desired every year, and from the same land, then two crops of seed, in successive years, should be planted, for, as you must be aware, the plant is biennial, and blooms only every other year. * * *

—, Mississippi, Feb. 23, 1895.

I don't know how much sweet clover there may be within a radius of two miles of my home, but to guess at it I should say perhaps 100 acres that will bloom this season—counting what is on the banks of ditches and in waste places, of which I have about 50 acres.

I like your bulletin (No. 2) on sweet clover very much. I think it covers all the ground, judging from my experience with the plant, and that no part of it is exaggerated. * * *

—, Mississippi, March 28, 1895.

I have grazed cows, hogs and horses for years on sweet clover, but no sheep, for I do not keep them. Sweet clover will bloat cows to some extent the second year of its growth, but I have never had any special trouble in that direction.

My present crop of sweet clover is now tall enough to graze, and it compares favorably with all my sweet clover crops in past years. * * *

—, Mississippi, May 2, 1895.

The average weight of a bushel of sweet clover seed, where unhulled, is about 32 pounds. When it weighs 35 pounds, it must be very clean and very plump seed.

I have read your Sweet Clover Bulletin No. 1, and can indorse it fully except certain statements that I know nothing about. I presume they must be correct, or you would not have made them.

My sweet clover is now from 15 to 24 inches high, according to the fertility of the soil. I mow once and then get a big crop of seed to plant and to sell. I can, if I so wish, mow twice for hay, and then the plants will mature plenty of seed to re-seed the land. I always mow it twice for hay the first year, and often three times. The seed ripens here in August, but if it has been cut once this delays the ripening of the seed about two weeks, say about the latter part of August.

There are always a few scattering stalks of sweet clover that will bloom the first year, but they are very few indeed.

I think two crops of seed should always be sown on the same land, that is, the seed should be sown two years in succession. This insures a new growth of plants to cover the ground in the fall of the year, when the old plants have died out. This new growth of young plants always remains green all through the fall and during the first part of winter. This plan always insures a crop of blooming plants for the bees to gather honey from every year, and from the same plot of ground. * * *



Honey-Producers Helping Themselves.

BY G. M. DOOLITTLE.

It was with the greatest of interest that I read the article headed, "How Honey-Producers Can Help Themselves," by Emerson T. Abbott, on page 273; and as I feel a great desire to help myself always, where I can do so, I crave the privilege of asking Mr. Abbott a few questions, so that we as bee-keepers may the better know how to succeed.

Mr. A. tells us we should work our home market all it will possibly bear, and intimates, by his shopping story, that if we did this we might obtain as much for our product as did the storekeeper who sold the best of Colorado honey at 20 cents per pound. What I wish Mr. A. to tell us is, why it is that we should be obliged to push our own interests and honey-products into every home within 20 miles of us (our home market), often to the disgust and hindrance of those whose "time is money," that we may obtain the fancy price of 20 cents per pound for honey, or else go under with the "survival of the fittest," while during the seventies the whole of our product (not the best or "fancy") was sought after by buyers from abroad, at a price ranging from 25 to 30 cents per pound, free on board the cars, or at our own homes. If he

can tell us this, we can intelligently solve at least one of the problems which confronts every bee-keeper. Being told that we must economize at every point of production, and produce only a fancy article in these times of close competition, if we would survive, will make of me and mine the half fed and less clothed caricatures of humanity, when carried to its logical conclusion.

Again, Mr. Abbott tells us, "I know times are close, and people are forced to economize." Will Mr. A. tell us why times are close, and why we are forced to economize, as bee-keepers, while some of our statesmen (?) are telling us that the country was never so prosperous as now? Were these close times brought on us of God? Did not God say, "The earth is the Lords and the fullness thereof?" and did He not say, till the soil, eat, live and be happy? Has the earth become barren and unfruitful, so that the masses must economize, and thousands suffer from starvation?

Then Mr. A. tells us, "It is a favorite saying of mine that all I want is health and to be let alone." Does he mean by this that I have no privilege to share his markets for honey with him? That I must not send my fancy honey to the same market to which his fancy honey goes? As a minister of the Gospel of the Lord Jesus Christ, does he not know that the blessed Master said, "All ye are brethren?" and for him to ask me to let him alone, and give him all the markets, is not loving his neighbor as himself?

Again: Suppose that Mr. A. is right in asking that he as a bee-keeper should be let alone, does he not know that every bee-keeper who depends upon the production from his apiary for a living, is not being let alone, but is being robbed of 52 cents out of every dollar's worth of wealth which that bee-keeper produces, that a few may roll in wealth "who toil not neither do they spin?" If he knows this, should he not as a true "watchman on the towers of Zion," cry out in plain language to us humble ones, instead of preaching fancy honey and economy?

I endorse Mr. Abbott's views in the main, but cannot endorse the points hinted at in the above questions till I have further enlightenment on these points. Will Mr. A. please enlighten us?
Borodino, N. Y.



No. 4.—Producing Comb Honey in Michigan.

BY W. Z. HUTCHINSON.

(Continued from page 277.)

As the basswood harvest draws to a close all sections should be taken from the hives. Before the bees commence "snooping" around and dipping into any exposed honey, all of the honey should be off the hives. If there is any time of the year when the worst disposition of the bees shows itself it is at the close of the basswood honey harvest, and a little robbing will intensify it a hundred fold. If bee-escapes are used, and they should be, there is not so much necessity of promptness in getting off the honey, but I think it better to get the honey off as soon as possible, and then if feeding back is to be practiced to secure the completion of unfinished sections, it can be commenced while everything is in good trim—when there are no empty cells in the brood-nest to be filled with the feed.

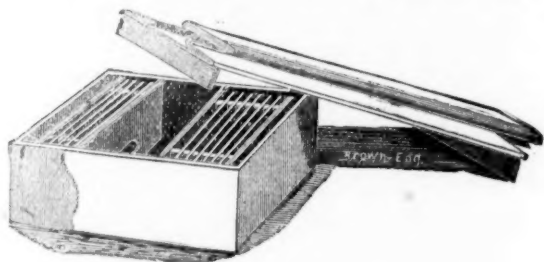
The honey should be sorted into four grades—the finished, that is nearly all sealed, sections that are half finished, and those that are less than half completed. In putting the sections back on the hives, each grade should be kept by itself. Those nearly completed should be put in cases by themselves, and those that are half completed treated in a similar manner. If separators are not used, there is no part of feeding back that calls for the exercise of more care, patience and skill, than that of filling the cases with unfinished sections, particularly is this true of the sections that are nearly com-

pleted. If at any place the combs come so near together that a bee cannot pass between them, a bridge of wax will be made connecting the two combs, and when they are pulled apart, the comb is broken, and the honey set to running. If too wide a space is left between the combs, there is a disposition, especially if the bees are crowded, and the feeding generous, to build patches of comb right on top of the sealed comb.

When the combs are all in the supers, and ready to put on the hives, then comes the selection of the colonies that are to do the work. Bright yellow bees are simply worthless to use in feeding back. Dark Italians will often do pretty fair work. A cross between the Italians and the blacks comes next, but the bee *par excellence* for this work is the Simon-pure black bee. A good, strong colony is needed, and if the queen is of the current year, so much the better. A colony with such a queen will very seldom swarm, even under the stimulus of feeding, and she will not allow the bees to crowd the feed into the brood-nest. It is better, too, if the combs in the brood-nest could be of the current year, as old, black combs in the brood-nest sometimes cause the sections to show travel-stain if they are kept on the hives very long. It will pay to take considerable pains to have the right kind of bees, queen and combs, as success turns upon attention to all these details. The brood-nest should be contracted to at least the capacity of five Langstroth frames. Better work will be done if it is contracted to only three combs, but such severe contraction is at the expense of the welfare of the colony. If five combs are left, the feeding back is really an improvement to the colony.

Before putting the sections on the colonies that are to do the work, set them on other strong colonies, putting one case of sections on a hive. They will soon be filled with bees, when they can be carried, bees and all, to the colonies that are to do the work. There will be but little if any quarrelling, and most of the bees will remain where they are carried. This gives a superabundance of bees—and that is what is needed. Put two cases of sections on a hive, the lower case being of the half-completed sections, and the upper one of those that are nearly completed.

The kind of feeder is important. It must be one in which there is no possibility of the bees getting drowned, or even daubed in the least; and it must be capable of examination and filling without coming in contact with the bees. My preference is decidedly for the Heddon. This covers the whole



The Heddon Feeder.

top of the hive, and meets the requirements just mentioned. It is better that the first feeding be done after it is so dark that the bees cannot fly, as it excites them considerably, especially if they have been getting no honey for a few days. After the first feeding it does not matter when the feeding is done.

It is better if the honey is thinned somewhat and warmed. One quart of boiling water to 10 pounds of honey is about right. I heat 10 quarts of water until it boils, then mix it with 100 pounds of honey.

If all goes well, much depending upon the weather, some of the cases of sections will soon be ready to come off. As

during the honey harvest, I do not always wait until all of the sections in a case are sealed over. If there are only one or two in each corner, I take off the case, using the bee-escapes, and take out the unfinished sections, putting these together in another case until I get the case full, when it is, of course, returned to the bees.

As the feeding progresses I keep close watch of the characteristics of each colony. It may seem strange, but colonies that seem exactly alike in all respects often work entirely different. One will put all of the honey in the sections, seal it over quickly and smoothly, and the other will gorge the brood-nest, or plaster the honey around here and there in brace-combs, and make a regular "botch" of the whole job. As the finished sections come off, these poor workers are discarded. As a rule, there is little difficulty in getting the bees to fill the combs with honey, but to get them to seal it over quickly and smoothly is something that calls for the best of management. With only one case of sections on the hive, and continued feeding, I doubt if the sections would ever be completely sealed. So long as the honey keeps coming, the bees seem to feel that they must hold some of the cells open to receive it. They will build brace-combs, lengthen out others, build on top of sealed combs, etc. Put another case of partly-finished sections beneath the one that is nearly completed, and they will at once cap over the cells in the upper case. If a large part of the sections are all completed except capping, and a spell of hot weather comes on, better work at capping will often be done if feeding is omitted for three or four days. As the number of unfinished sections becomes less and less, and the number of colonies engaged in the work also are less in number, it may sometimes be best to use a case of the sections that are less than one-half finished, as it will be impossible to get the others all sealed over without using some others under them.

I know of only two objections to "feeding back." One is, that "fed honey" has a slightly different taste from that gathered directly from the flowers. This is not so very pronounced, but it would be noticed by one who was experienced in the matter. The other objection is that such honey will candy more quickly than that stored direct from the blossoms. When the sections are nearly completed, and feeding is resorted to simply to have them completed and capped over, the proportion of "fed honey" is so small that these objections are not very serious. If a large proportion of the honey is "fed honey," it would be well to see that it is sold in such a market that it will be consumed before the beginning of cold weather.

The advantages of feeding back can be stated in a few words. Comb honey is more salable, at a higher price, than extracted, and, if the latter can be changed into the former, at no great expense, there are quicker sales and greater profits. The greatest advantage, however, is in securing the completion of nearly finished sections. Taking one year with another, I have secured about two pounds of comb honey from the feeding of three pounds of extracted honey. With the right kind of weather and bees, I have done much better—securing four pounds for five.

Flint, Mich.



Expansion of the Honey-Exchange Idea.

BY L. D. LEONARD.

In the expansion of the "exchange" idea, I believe we have a possible solution of, 1st, the overstocking of any market with the honey-product at any time; 2nd, the means of disposing of said product; 3rd, the price; 4th, adulteration.

I would have an Exchange in every State, with honey depots in every large city, under its direction. It should be the business of the Exchange to know how much honey was being produced in the State during the honey season, and also

how much the markets required for consumption. Should the supply equal the demand, then no honey would be shipped in from other Exchanges, the home product, of course, taking precedence.

The Exchange depots should be self-supporting, by regular percentage charges for all honey sold through the Exchange (made up of course by honey-producers); working through its executive officers and depot managers, it could set the price on whatever figure they wished, or thought fair and right. It could make adulteration with glucose next to impossible, for if the business was principally done through the Exchanges, suspicion would immediately attach to sales through other channels, and should adulteration be found, the Exchange should prosecute under the laws of the State; the members of the Exchange keeping a fund on hand for this purpose, the same as the Bee-Keepers' Union does in defense of its members. This would be co-operation as it is conducted to-day in other lines of business, and it seems about the only way of defense against the leeches.

I might suggest, although I am not a member of the North American Bee-Keepers' Association, that it would give that organization something practical to do if it could be made into a National Exchange, which might be simply advisory, or have a central bureau located in a central city, with an organ, perhaps, after the manner of other trades. Producers must organize in some way as a matter of self-defense, and it seems as if the "exchange" idea might be worked out with practical results.

Minneapolis, Minn.

Questions AND Answers

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Color of Brood-Combs.

Why do bees build their combs a dark brown color in the brood-chamber? I transferred a colony a few days ago from an 8-frame hive to a 10-frame one. The frames being of different size, I had to cut the comb to make it fit. Do the bees use the scraps of old comb to build combs from?

J. W. H.

ANSWER.—The reason for the dark color is that bits of the old wax are used. That is one reason given for the use of thick top-bars, the bees carrying old black wax to help seal the sections if they are too near the brood-combs.

Brimstoning Honey.

Referring to the article by C. Davenport on fumigation, on page 274, how much sulphur would be required for 100 pounds of honey in one-pound sections, sulphured after the manner he describes? One tea-spoonful level or heaping, or one table-spoonful level or heaping, or how much exactly? and how long should the lamp be left burning, how high should the flames rise of sulphur? Should the sulphur be scattered, or should it be in a heap? Would the lamp used in the Daisy foundation fastener be too large?

I am obliged to ask all these questions, as I do not wish to injure the small amount of honey I have to sulphur.

M. C. P.

ANSWER.—Referring to page 274, I confess it seems rather tantalizing to be told "one has to be very careful not to use too much sulphur, or to leave the supers on too long,

for if they do the honey will be colored," and find not a word said about the amount of sulphur, whether the size of a pea or a cocoanut, and not a word said as to whether it should be left a minute or a day. If the instruction given to your "inexperienced hand" was no more definite than that given on page 275, no wonder your honey was spoiled, Mr. Davenport, and served you right, too.

No doubt it took some experimenting to get at the right amount of sulphur and the right amount of time, and perhaps Mr. Davenport will help out by giving his practice. In the meantime, if the questioner desires to act promptly in the matter, he might try for his 100 pounds of honey half a level tea-spoonful of sulphur, letting it stay on 20 minutes after the sulphur first takes fire. That's only a guess, and it's possible it may be too much sulphur or time. If no greenish tint is seen on any part of the sections, then there's no danger of any other harm. A day or two later look and see if any worms are left alive. If any are found, give a little heavier dose of sulphur, and a little more time, and continue to increase the dose till a cure is effected. Continuing my guessing, I should say that the sulphur should be put in a heap; any lamp of the right height to fit in the box being used, and the flame kept turned up just enough to keep the sulphur burning. I should think the lamp used in the Daisy fastener would be all right.

But what under the sun do you want to brimstone your honey for? If left over from last year it hardly ought to have any worms in it. Still, no matter what it ought to do, if worms are there brimstone away.

What Ails My Bees?

I have got it, and I am now like A. E. H., of Tacoma, Wash., on page 587, of the Bee Journal for 1895. Sure enough, what ails the bees? I have the same or similar trouble with one colony of my bees. I thought at first that likely it was poisoned from some sprayed orchard bloom. I never saw anything like it in my long experience with bees. In the morning, when bees commence to fly out, there is quite a lot that can't fly, and by noon there are hundreds of them in front of the hive crawling in every direction, and trying to fly. It seems as if a great portion of them get use of their wings in the afternoon, and fly away, and those that don't or can't fly by night, are clustered on the alighting-board, or on the front of the hive, and mostly die that night, and are dragged off the next morning by the other bees. It seems A. E. H. says that they are bloated and full of that thick, yellow fluid. It seems to me like a case of constipation, as one can see many splotches where they have crawled on the grass, after which it seems as if they take their flight, and are all right. If there is any information on this line, I would like to have it.

A. C.

Pollock, Mo.

ANSWER.—If any one can offer any helpful suggestion as to the cause or cure of the trouble in this case, he will please speak out.

Closed-End Standing and Partly Closed-End Hanging Frames.

I wish you would at an early date thoroughly elucidate the respective advantages and disadvantages of the closed-end standing, and of the partly open end hanging frames—(as, for instance, Quinby, Danzenbaker, Root and Langstroth)—especially as adapted to this far Southern climate, where we have no cold in winters, and leave the hives intact out-doors all the year.

FLORIDA.

ANSWER.—It isn't an easy thing in a few words to give a full elucidation of the comparative merits of the two kinds of hives. Very likely there is much in being used to a thing, and in localities where a certain hive has been chiefly used, it might be a hard thing to convince any one that a change could be anything but a damage. One point of advantage in the closed-end frames is that there is no open space for the air to circulate around the frames as with the loose-hanging

frames. Perhaps that might not count for anything in the South, but for wintering in the North it certainly has the appearance of an advantage. Aside from that it is perhaps doubtful whether there is any difference in the two systems so far as the bees are concerned. The difference relates to the convenience of the bee-keeper, and, as already intimated, those who are used to one kind will be likely to prefer that. In handling frames, the loose-hanging frames have the advantage that one does not need to pry them apart as one does the closed-end frames.

On the other hand, there seems a growing feeling that frames should be spaced at fixed distances without stopping to adjust them to the eye. And when thus spaced, it is doubtful whether it is much more trouble to pry apart the closed-end frames than those which are partly closed, as the Hoffman. Unless some sort of spacing is used which makes the point of contact so small that the frames can be moved apart without prying, the end-bars may perhaps be as well closed their entire length.

A Question on Management for Section Honey.

I have a colony in two stories, the upper story being now solid with honey and lots of brood below. I want to get section honey from them. Shall I let them be as they are, or what shall I do?

T. W. S.

ANSWER.—Very likely your colony would be better off if some of that honey had been taken away from them, for if the queen is good she would probably have been laying in some of the combs in the upper story. Possibly you may gain now by extracting some of the combs, or by taking some of them away and giving empty combs or foundation. Whether you should reduce to one story, or keep both at time of putting on sections is a question. If the combs are filled, it would seem they can hardly prevent honey going into the sections, and yet some object to having more than one story. It's a matter that needs some experimenting, and if you have more than one colony, it might be a good thing to try both ways. If you want swarms you will be more sure to get them with one story, and if you want to avoid swarming, you may be safer to keep the two stories, filling in with dummies the place occupied with empty combs, if there be any. In any case, see to it right away that there is plenty of room for the queen to lay.



The "Handy" Hive as a Large or Small Hive.

I have always used a large hive, even for comb honey, at certain periods of the season. I have used a large hive for extracting, at all times, except in winter and early spring. My hives hold 1000 inches of brood-combs each; and when used singly, mine is a small hive. Two of them can be put together in two seconds, and then it is a large hive. Three or more can be added in the same way, to increase the hive to any size that Mr. Dadant could possibly desire. Next season I shall run part of my colonies for extracted, and will give those colonies two hives for a brood-nest. I will put a queen-excluding honey-board on this, and then use as many hives exactly like the brood-hives, and filled with extracting-combs, as are needed to store the entire crop of honey. At the end of the white-honey season I will use an escape-board under these extracting-hives, and in one night the bees will be out of them, and there will not be a single cell of brood in them to disturb one's feelings.

Next fall, after the white honey is removed from the hives, I will put a cover on the two hives I have been using for a brood-nest, so the bees may fill it with dark honey for winter. If the fall flow is good, and more room is needed, I open the top hive and remove sealed combs of honey, and put empty ones in their place to be filled, so there will at all times be vacant room for storing all the nectar within reach of the bees. The combs of dark honey I got as above are the store from which I will draw supplies for feeding light colonies for wintering and for breeding up again next spring. In the fall, say early in October, I will take the double brood-chamber apart, and into one section of it I will put abundant stores to last the colony through the winter. The bees will be brushed from the removed hive, and that will be set in the iron curing-house, where no rats or mice can reach them to spoil the combs, for in the spring I will use them again to transform my small hive into a large one, that the system I use may be repeated again.—B. TAYLOR, in Gleanings.

Painted vs. Unpainted Hives.

Several years ago I had a number of box-hives, some of which were painted, while others were not. I set them out of the cellar about the first of April, in as nearly an equal condition as well could be. In the morning after every cold, frosty night, there would be water running out at the entrance of those that were painted, and on tipping them up the combs were found to be quite wet on the outside next the hive, from the condensation of moisture, while those in the unpainted hives were dry and nice, and these last increased in numbers faster and swarmed from one to two weeks earlier than did those in the painted hives. This gave a greater force of bees to work in the honey harvest, which in turn gave a larger yield of honey, and this gave more money for me to jingle in my pockets.

"But," says one, "I use ground cork, cut straw, sawdust, forest leavest or some other absorbent in the top of the hives to take care of the moisture, by letting any excess that may arise pass through these and out of the top of the cover." This will help much as far as the moisture is concerned, but if not done on a scientific plan it will let out much of the heat, which is so necessary for the welfare of the colony in early spring, by such a direct draft process. Even if done properly, I cannot help thinking that hives will keep bees better if unpainted. Paint is useful only so far as looks and durability are concerned, and is positively injurious as retarding the evaporation of moisture.

This is the result I have arrived at after 25 years of experience and close observation with single-walled hives, and I believe the damage to the bees is far greater than the cost of a new hive occasionally, where ordinary hives are used, say nothing of the cost of the paint or time in putting it on.—G. M. DOOLITTLE, in American Bee-Keeper.

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Sweet Clover is continuing to receive kind words from various sources. Messrs. C. H. Dibbern & Son, of Milan, Ill., reported in *Gleanings* that "Farmers are beginning to find out that sweet clover is a valuable plant besides being a good honey-plant." In the same number of that paper Joseph Shaw, of Strong City, Kans., had this paragraph:

I sow early in the spring about 10 pounds of seed to the acre, with oats; but I think it is better alone. I am saving about two bushels of seed to sow in the corn at the last cultivating. I tried about four acres about the last of August, 1895, but it did not come up. Horses like it first rate when they get used to it. Bees won't work on anything else while the sweet clover is in blossom.

The "Union" and the North American.

—In *Gleanings* for May 1, both Mr. P. H. Elwood and Editor Root have something to say about the amalgamation of the North American Bee-Keepers' Association and the National Bee-Keepers' Union. In order that all may see just the line of argument used, we reproduce what they had to say. The following paragraphs are from Mr. Elwood, Starkville, N. Y.:

INACTION OF THE UNION ON THE MATTER OF ADULTERATION.

It is a pity that the Bee-Keepers' Union, while under the efficient management of Thomas G. Newman, could not have taken up the matter of adulteration. Undoubtedly it would have done so had the bee-keepers of this country thrown all their energies into one organization instead of dividing them between two. It will require a united front and some money to stop this business. At a time when the Union so much needs the cordial support of every intelligent bee-keeper of the United States, it seems unwise to refuse the admission of the North American, for this is really what this society is asking of us. The constitution advised by the amalgamation committee differs but slightly from the present constitution; and I cannot see that it will impair the usefulness of the Union, while it will bring to us a large and valuable support. The management remains the same, vested in a board of directors selected by the votes of all of the members of the Union, as at present. The popular annual meeting, if such is held, has no control over the funds of the Union—neither directs its policy nor elects any of its officers.

I can understand why the Canadians oppose the amalgamation, as they probably foresee that it will be found impracticable to make the new Union international. For several years the usefulness of the North American has been seriously

impaired, and its existence imperiled, if not shortened, by a long-continued quarrel between the Americans and the Canadians. I suggest that the present time would be a favorable opportunity to end this belligerency by each party consenting to mind its own business. By making the Union a national organization, we shall be at liberty to attend to the question of adulteration of our products, and the enactment of such laws as may be necessary to wipe it out; and if, at any future time, the board of directors conclude that the Union can assist in any way in marketing honey, there will be opportunity to do so.

It may be found practical to disseminate information as to the relative needs of different markets and different parts of the country for shipments of honey. Our weekly *American Bee Journal* is published at the present headquarters of the Union, and information as to the weekly receipts and further needs of the chief distributing-points could be quickly disseminated. In some such way an intelligent oversight of the markets might be had, of much service to honey-producers, with no investments, and at not a heavy expense. It would not do to use Canadian money for this purpose, nor would it be advisable for us to try to assist them in a work that they could do so much better themselves.

But more important than any exchange or possible supervision is the thorough development of a home market by every bee-keeper. The bee-keepers of this part of the country could easily sell all they produce in their home markets when such amount does not exceed a ton, and is put up in such form as to suit the demand of consumers. This would reduce the amount sent to the cities or main distributing-points, so that prices would materially improve.

Editor Root says he had this editorial written before he saw Mr. Elwood's article, and was pleased to note the harmony existing between himself and Mr. Elwood upon the subject of amalgamation:

A NEW BEE-KEEPERS' UNION.

At the risk of putting my foot in it, I am going to make another suggestion, or, more correctly, "amalgamate" the plans suggested by me before, and those suggested by Bro. York. If the amalgamation of the Bee-Keepers' Union with the North American is not wise, then don't do it. Let the North American stand just as it is. Then I would have the Bee-Keepers' Union so modified in its constitution and its plan of operation that it shall have annual meetings, elect officers, discuss problems of protection to bee-keepers, and also those that have come before the North American—in a word, take in all the interests that concern the honey-business.

It is evident that it is going to make trouble to try to force the amalgamation of the North American and Union. One society will have all it can do to take care of the affairs of one country, without trying to spread itself all over the continent; and a new union or society can just as well do the work formerly done by the two existing organizations.

When Mr. Hutchinson proposed the matter of amalgamation of the two societies, and the rest of us fell in with that plan, the idea, as I understood it, was not so much amalgamation as that we did not need two societies. Almost the only objection against amalgamation is the idea of making the Union international. By the plan above proposed, the Union will remain national; and yet the ultimatum that most of us desire to obtain—annual meetings, and have one society do all the work that was formerly done by the two—can be accomplished. In the meantime, the old North American can have annual meetings, or triennial meetings, as suggested by Bro. York, or disband.

We are in most hearty accord with nearly all that both Mr. Elwood and Mr. Root say. We never have seen the slightest reason for any one opposing the amalgamation of the two societies. The North American has practically said, "Take us in, and then do just as you please." What more could the Union want? All the opposition we have seen so far seems to have been born of misunderstandings and misconceptions of matters generally.

We might call attention to the fact that the headquarters of the Union are now in San Diego, Calif., and not, as Mr. Elwood has it, where the *American Bee Journal* is published—in Chicago. It was here until the General Manager (Mr. Newman) removed to California.

It does seem to us that if the benefits of amalgamation could be properly placed before the membership of the Bee-

Keepers' Union, and a vote taken thereon, it would carry with a whoop. The General Manager has favored it heartily, and we believe almost every member would, too, if each had a chance to vote upon it.

We would suggest that the Committee on Amalgamation, appointed at Toronto, get up an address setting forth some of the advantages of amalgamation, and request General Manager Newman to submit the same to the membership of the Union, accompanied by a "Yes" and "No" voting-blank. We think the thing can be settled promptly and satisfactorily very soon in this way. If the majority vote "No" on the question of amalgamation, then at the next meeting of the North American steps can be taken to re-organize on a different basis, if thought best. Surely, there is much that the Union should undertake in furthering the interests of bee-keeping, but if it adheres to its present policy of simply defending apiarists in their rights as to keeping bees, then the North American must take up the other issues and push them to a settlement.

The Union has done a magnificent work, but we believe there are other lines that it should now advance upon. And we think that with the added benefits of amalgamation, it could go forth and win even greater victories in the future than it has in the past.

Cyprian Bees.—One of our subscribers wishes to get some pure Cyprian queens. Who knows where they can be had in this country? If any one can tell, will you please write us, and we will see that the information gets to the person desiring it.

New Subscribers to Bee-Papers.—One of our Iowa subscribers wrote us in the following strain recently, when renewing his subscription, about our endeavor to increase the number of subscribers to the Bee Journal:

MR. EDITOR:—Just a word please. If you will quit giving premiums for getting new subscribers, I will give \$1.50 a year, or \$2.00, for the American Bee Journal; or if you decrease the number of bee-keepers, and raise the price of the Bee Journal as you do so, I will pay it up to \$10. I have hurt my pocket-book badly by giving information, and even showing others how to keep bees. We have nearly ruined the business. Now I am too old to take up something new.

No, don't ask your patrons to send new subscribers, for it is their ruin. Send us a good journal, help us to keep our business paying, and make us pay you for it. *Nary more new subscribers will I ever send for a bee-paper.*

OLD SUBSCRIBER.

The foregoing letter was shown to two bee-keepers with the question, "How's that?" After reading it over, the younger said, "That is all nonsense?"

The old man looked thoughtful for a minute, and then said, "I am not so sure of that. Why is it nonsense?"

"Because," said the younger, "it won't make much difference, no matter how many new men go into the business."

"Won't it, indeed?" said the elder. "If another man sits down beside me and divides the pasturage with me when I have already as many bees as the ground will support, why isn't that a damage to me?"

"Yes, but he won't keep at it long, for the experiment will be a failure, and in a year or two he'll get out of the way."

"Very true, perhaps," said the elder, "but in the meantime I have to pay the penalty for his foolishness, and during that year or more the loss will be more to me than the cost of all the bee-journals for a lifetime." Then he went on to say:

"Bee-keepers as a rule are very liberal in their ideas, and like to give information to others, and many of them would scoff at the idea of laying a straw in the way of any one going into the business, but after all, the man who wrote that letter has only said what many a man thinks, but perhaps hasn't the courage to say. I believe in bee-journals, and believe in

increasing their circulation, but still, if their main effect is to increase the ranks of bee-keepers, I'd rather pay \$5 or \$10 a year for a good paper and have it confined strictly to those who have 25 colonies of bees or more. That is nothing more than is done in other lines of business. There is a florists' paper published right in the city of Chicago, and if you send the subscription price for the paper, your money will be promptly returned to you, unless you furnish satisfactory proof that you are a professional florist. No matter how valuable the information contained in that journal might be to you as an amateur cultivator of flowers, you can't come in. Now, if that's all right, why isn't it right for those who make their bread and butter out of their bees to try all they can to keep out those who will do little more than make a failure and spoil the markets for others?"

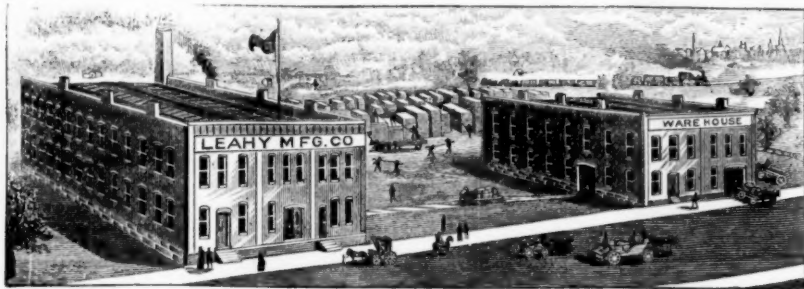
Evidently, like most other great questions, this one has two sides to it. With all the liberal-mindedness that bee-keepers in general possess, it is only human nature to look out for number one. But it does not necessarily follow that increase of subscribers means increase of dabblers in bee-keeping. There are thousands already in the business who take no paper on bee-keeping, and it is from this class that recruits are obtained, not one in a thousand subscribing for a bee-paper until *after* he has become a bee-keeper. Is it not a fact that more harm is done to the business by the ignorant than by the well-informed? And when a man is already in the business, is it not better that he should take a bee-paper, so as to be shifted from the ranks of the ignorant to those of the well-informed?

Admitting for the sake of argument that "Old Subscriber" has the right view in thinking that it would be better to have a limited number of subscribers at a large price, the question is how that could be brought about. The man who should start a journal with a circulation of only 1,000, at a subscription price that would afford a living, would only invite certain failure. If our friend will *guarantee* us a circulation of 1,000 at \$10 each, or 4,000 at \$2.50 each, we stand ready to make an agreement. But suppose that could be done, how much would be accomplished? For it would only make the difference of having other papers catch the new subscribers, and how much would be gained?

When our friend looks at the matter fairly, he will probably see that beginners will continue to enter the ranks, and that they enter the ranks *before* they become subscribers, and the publisher who has at heart the best interests of his readers will do all he can to increase his circulation, that he may thereby afford to give them all a better paper.

The Position of Apiculture among other pursuits is sometimes belittled by those who are not well-informed about its progress and development during the past half century. Mr. P. H. Elwood, in commenting on this subject in a recent issue of *Gleanings*, called attention to the fact that apiculture has a record and history of which no one need be ashamed. He said:

The history of apiculture is a record we need not be ashamed of. "Langstroth on the Honey-Bee," written more than a third of a century ago, was the ablest and the best written hand-book that had appeared upon any rural pursuit, and there are very few works at the present time that will bear comparison with it. The first volume of the American Bee Journal occupies nearly the same position among rural journals. The invention of the honey-extractor antedated by nearly a score of years the invention of the centrifugal cream-extractor; and but for the former, the latter might never have been thought of. Comb foundation, zinc excluders, the bee-escape, smokers, etc., bear favorable comparison with agricultural inventions. The discovery of parthenogenesis, by the blind Huber, followed since by the unraveling of so many of the scientific mysteries of the bee-hive, makes a record not surpassed in any branch of husbandry. In literature, in invention, in discovery, or even in practical results, we do not fear comparison with any branch of agriculture. There is no need of belittling the pursuit because a few of us are not well posted.



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Dear Sirs:—The Sections arrived in due time, and are all O. K. so far as examined. They are simply perfection. I can't see how you can furnish such goods at such low prices. I hope you may live long and do well. Yours respectfully, Z. S. WEAVER, Courtney, Tex.

Gents:—I received the "Higginsville Smoker" all O. K. It's a dandy; please find enclosed stamps for another. Yours truly, OTTO ENDERS, Oswego, N. Y.

Gentlemen:—I have bought Supplies from nearly all the large manufacturers by the carload, and I must say yours are as good as the best. Indeed, in many lines they are the best. It is a pleasure to handle them. E. T. FLANAGAN, Belleville, Illinois.

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DR. GEO. LACKE, Newburgh, Ind.

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GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

General Items.

Outlook for an Old-Time Honey-Year.

Never in all my bee-keeping experience have I seen the bees in as fine a condition as they are at this date. Hives are full of brood and young bees. Fruit-bloom has been immense. The bees have had a chance to work every day since spring commenced. I am sure I will have swarms the first week in May, and heretofore I never had a swarm before May 30. The outlook is good for an old-time honey-year.

CHAUNCEY REYNOLDS.

Fremont, Ohio, April 30.

A Beginner's Report.

I built a new bee-repository last fall, 10x10 feet, with 28 inches filled with sawdust. It is close to my shop, so the door into my repository opens into the shop on the north side. Once a month I opened the door for 15 or 30 minutes for ventilation. I took the bottom-boards off all but one hive, and raised it one inch; its colony came out the best of all, but the rest are in good condition.

On Nov. 21, 1895, I put in 14 colonies, and April 15, 1896, I took out the 14, all in good condition.

I have one colony of leather-colored Italians, five of 5-banded, three of 3-banded, and five of our own native bees. I started last year with five colonies; had two natural swarms, and divided the rest. I bought four queens, and reared four. I use the Langstroth hive.

CARL TAYLOR.

Harrowsmith, Ont., April 23.

A Robbing Experiment, Etc.

The result of an experiment I have just completed is as follows: Two weeks ago yesterday, I opened the hive of a colony of bees that I knew were very weak, and found that there were not more than enough bees to cover a space six inches square, but as they had a very nice queen and a hive full of honey, I closed them up again to see if they would not build up in numbers as soon as the weather was warm enough for them to rear brood. There were eggs, but no brood in the hive. About five hours later I found the hive in an uproar with robbers. I gave them a good smoking, and as soon as the bees stopped coming out and started in again, I closed up the hive tight, and did not open it again for two days. In a very little while they were robbing as badly as before, and when I thought the hive had as many robber-bees in it as there were likely to be at any one time, I closed it up again, and kept it closed six days, until no bees were flying about the outside of the hive, and then opened it in the morning, and those robber-bees came quietly out, and went to work bringing in pollen, guarding the hive, and so on, just as though they were hatched and reared in that hive. This morning I found sealed brood and eggs, and brood in all stages, and three or four times as many bees as when I looked it through before.

I have 23 colonies out of 28 last fall, 15 unusually strong, 5 of fair strength, and 3 weak. I wintered them by putting all the hives but three on the south side of a tight board-fence, with a can-

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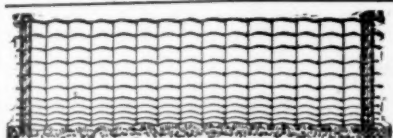
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8A26t J. D. GIVENS, Lisbon, Tex.

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was awning over it, as close together as they would go, and two rows deep, the lower row on the summer stand, which is two 2x4 scantings on posts 15 inches high; no packing of any sort. The hives I left out are single-walled; I made no change in them at all, and the bees in them came through as well as any. Those I lost were too weak to keep warm.

By the way, the next day after the last cold snap this spring, I brushed all the bees, including the queen (of the hive referred to at the first of this letter), off the frames on the ground, thinking they were frozen to death, and then when the sun shone on them, and they began to crawl about, I gathered them up again and put them back into their hive.

I think the bees are getting all the stores they are using, as I have had hard work to use up the frames of honey from the five hives from which the bees died, and in order to use the last two frames, I took out one frame of brood and shook all but two or three bees on each side of it off, and put it into one of the three weak colonies; they at once killed and threw out their queen. What was the matter? If I had left any bees on the frame, I should lay it to them. One of the colonies I lost was a case of foul brood; they were of medium strength. I killed their queen, put the bees into another hive with a weak colony and no brood, extracted the wax, and made a bonfire of the frames, hive, top, bottom and all. The colony I united the bees with, have sealed brood now, with no sign of foul brood, and there is not a trace of it in any of my other hives.

This spring is the most favorable for bees we have had here for at least six years.

E. L. DUNHAM.

Greeley, Colo., May 2.

A Stingless Joke.

One of as old a bee-men as we have here was with me looking at my bees, and one dabbed him on the cheek. He pulled out the sting, turned to me, and said: "That will be a drone; it lost its sting." And I could not convince him that he was not right.

Pollock, Mo.

ANDREW COTTON.

The Wintering Problem.

Having just passed my fifth experimental year in wintering bees, I will briefly rehearse my method of preparation and report results.

In the fall, about the time the brood is hatched, I examine every colony I intend to winter, taking out every frame, and making a careful estimate of the amount of honey. If any colony is short of 30 pounds, I feed sugar syrup—not percolated—until they have fully that amount. This insures them honey enough till the flow commences in the spring. My observation teaches me that colonies with plenty of stores in the hive, in the spring, will build up faster and be stronger than colonies with scanty stores, and fed to stimulate them. I know I should have better courage for labor, with my cellar and granary filled with a competence, than I should to depend on small items coming in from uncertain and unknown sources. Is it not so with bees? Living from hand to mouth is not indicative of prosperity. My bees build up well and early, always

ready for early fruit-bloom. They know nothing about spring dwindling, neither do I, except what I read in the journals.

Before feeding in the fall, I see that every colony is strong in bees. This I secure by uniting. Last fall I reduced 43 to 20 colonies, thus saving all my bees.

I winter them on the summer stands, putting an outside case over every hive, packing the enclosed space with planer-shavings, or some other dry, porous substance. Over the frames I place a dry, porous cushion. I placed a sealed cover (that is, if the bees would seal it) over a few of the colonies; I see but little difference in their condition, but would give the preference to the porous cushions. I leave the entrances open, shaded by a board leaning against the hive.

From the 12th to the 16th of this month I examined every colony, finding every one strong in bees, with ample stores, seeing either a queen or capped brood in every colony. My bees are now working finely, bringing in natural pollen.

As far as I learn, in this and adjoining towns, losses range from 25 to 100 per cent.

J. P. SMITH.

Sunapee, N. H., April 25.

Bees Have Done Well.

Bees have done well the last two weeks, but it is getting dry now. I have 32 colonies, two being stolen about a month ago. I don't think they are doing very well. I got a little over 1,000 pounds of honey last year from 30 colonies—about one-third comb honey, and the balance extracted.

L. V. MILLIKAN.

Spiceland, Ind., May 6.

Poor Season in Australia.

This season was a very poor one in Australia. The Australian Bee-Bulletin reports few bee-keepers doing first-rate. But I don't hear of anybody in Queensland having much surplus this season, even our leading bee-keeper—H. L. Jones, in Goodna—wrote that he has had terrible trouble in queen-rearing this season.

E. HANSEN.

Rockhampton, Queensland, Australia.

Sweet Clover Hay—A Correction.

Owing to pressing business, I had lately somewhat neglected reading the American Bee Journal, and thus was not aware of the request to state as to the amount of sweet clover hay I had made, it being understood by some that I had 200 tons of it, and to tell how to treat sweet clover for hay.

Dr. Miller, on page 259, has it right. I have never said that I had 200 tons of sweet clover in one year, but of hay of all kinds. The entire area I have in sweet clover is about 10 acres, of which but 6 acres were cut but once, giving me about 20 tons of hay.

I think that I fully explained in my article on sweet clover, how it should be treated when used for hay. (See page 806, for 1895.) Also Mr. John McArthur, on page 243, describes correctly how it should be treated, and those interested can read it there.

I gather all my hay with a hayloader, which is the most economic way of securing it, particularly clover. So as not to lose the leaves, the cured mellilot,

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EGGS for Hatching. Buff Leghorns, Indian Games, & Light Brahmas. Choice Birds. A breeder for 30 years. Prices on application

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W. A. CHRYSLER, Chatham, Ont.
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or sweet clover hay, must not be brittle when taken, and on hot days only part of the forenoon and the latter part of the afternoon is the proper time to work it. The more freely salt is used on each layer of hay, the better it will keep, and the better stock will relish it.

We have had glorious rains thus far, fully 9 inches since March 23. I consider my bees now fully "out of the woods," and have no winter losses nor fatal spring dwindling to report. I have two extra combs with honey still in reserve for each colony, should a late frost kill fruit and other bloom. I have a considerable amount of motherwort, matrimony-vine and catnip growing, which is of great help to the bees. The hardest and most critical time for my bees comes in June, but ends as soon as alfalfa, and in particular sweet clover, begins to bloom.

WM. STOLLEY.
Grand Island, Nebr., April 28.

Not a Flattering Prospect.

The prospect so far for a crop of honey is not flattering. The bees gathered but little honey from fruit-bloom, on account of the high winds that prevailed during the bloom, although they appear to be in a healthy condition. There is a fine prospect for white clover, and we may get some honey from that.

JAS. W. WILLIAMS.
Appleton City, Mo., May 1.

Helping the Honey Market, Etc.

The excellent and sensible article of Mr. Abbott, on page 273, needs no comment from me, but some things will bear being said over and over again. One of the ideas that many bee-keepers need to get out of their heads as soon as possible, is that "honey is honey." Honey isn't honey by a long shot in the way that is meant generally by that expression, that is, that all honey is alike, and that it makes very little difference what kind of stuff you put on the market as honey, only so you can honestly say it was stored by the bees. Particularly is this true of extracted honey. While it may be true that a large part of the public can't tell one kind of honey from another, and don't know when a poor article is palmed off upon them, yet they do know that they don't greatly relish it, and, thinking that all honey is alike, they conclude they don't care for honey, and so don't buy any good or bad. If I may be allowed to judge from what I have seen at various times, I should say that three-fourths of the extracted honey put on the market never should have been offered as an article for the table. But extracted honey thoroughly ripened and properly cared for will make a market for itself, with anything like a fair chance.

THAT REPORT.—On page 280, the editor tries to lick into shape a report that some illiterate person had succeeded in getting into print. If the editor had stopped to consider how the feelings of the budding writer might be all torn up by such editorial criticism, the said editor would have kindly taken the said writer by the hand and asked him whether he meant exactly what he said. Lest the youthful writer may be so utterly crushed by the remarks made, that he will make no attempt at reply, it may be a charitable act on my part to

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make some attempt at explanation for him. Here is the item that drew the editorial fire:

"My bees were taken out of the cellar in fine shape March 20. Only 2 dead out of 157; but a lot more may die before June."

Upon this the editor remarks: "We should presume.....their 'shape' shouldn't change much during the winter." It may not be amiss to remark to the critical editor that it is well to do as promptly as possible anything that one "should" do, and if he felt any obligation to presume why didn't he at once presume without saying he should do so. "He probably meant" "We presume;" and it is possible that instead of "shouldn't change," he meant "wouldn't change." "Why don't people say what they mean?"

As to the change of shape, experience shows too often that bees undergo a very decided change of shape in the course of the winter. They go into the cellar slender in form, but if they winter poorly, they come out with abdomens of aldermanic proportions, so whether their shape "should" change or not, as a matter of fact all too often it does change.

If the statement had been made that the bee-keeper lost two out of three of his bees, the editor would probably have understood that two-thirds of his bees were dead, and in the same way he should understand that "2 out of 157" means 2/157, or that 2 out of every 157 bees died.

"But then, he says he put in only 157 bees." I think, Mr. Editor, he says nothing of the kind. Indeed, he says nothing about the number of bees he put in the cellar, whether he put them in at all, or whether they flew in of their own accord. He only says that for every 157 bees 2 died.

Now, Mr. Editor, if there is anything that isn't entirely clear to you in this statement, don't hesitate to ask any questions you like. I'm used to answering questions. It isn't necessary to enclose a stamp with questions.

Marengo, Ill. C. C. MILLER.

[Yes, there are two or three questions we'd like to ask, but we don't know whether it is entirely safe to do so. But we'll take our chances. Doctor, how does it come that you take such an interest in the feelings of the "illiterate" "budding writer" you refer to? It seems to us that any "charitable act" you may feel like doing, could be more profitably placed.

We'll not ask any more questions just now, but wait until we can "take you by the hand," and ask them, for then it will not be necessary for either of us to use stamps.

By the way, the one question we have asked, you need not answer; simply think it over, and have your answer ready to "hand" to us when we have you "by the hand."—ED.]

Toronto Convention Report has been issued in pamphlet form, and will be mailed from the Bee Journal office for 25 cents. Better have a copy, if you have not read it. Only a limited number of copies were bound. □ □ □ □ □

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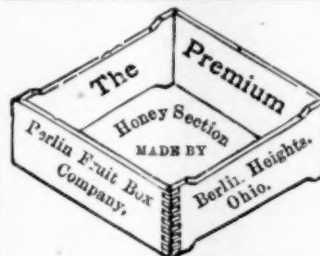
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Were bought for spot cash by a Chicago firm from an Eastern publisher who was about to be driven to the wall for the want of ready money. More than a million of these same Bibles, in every way like the illustration, have been sold during the past few years at three times the money we ask for them.



They are the genuine Teachers' Oxford Bibles, Divinity Circuit, round corners, gilt edges, complete teachers' helps, maps, 1,350 pages, bound in French seal, limp, with perfectly flexible backs. Sent prepaid.

Regular price, \$4.50; our price, \$2.25. Or we club it with the Bee Journal for one year—both for only \$2.75; or we will give this fine Bible free as a premium to any one sending 4 new subscribers to the Bee Journal one year (with \$4.00). No additional premium is given the new subscribers—simply the Bee Journal one year to each of them.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

FULL COLONIES

Of Italian Bees for \$4.00. Are worth twice the money. Queens bred from fine imported mother. Langstroth frames: 10-frame hives. All combs built on foundation in wired frames and perfect. Can't possibly break down in shipment. I have been keeping bees as a specialty for many years, and wish to retire from business. A rare chance to get superior colonies cheap. No circular. Send the price and get your bees. See the following from Mr. T. C. Potter, Indianapolis, Ind.:

"April 21st, 1896. Mr. T. H. Kloer. Dear Sir:—The colony of bees came last evening. It is perfectly satisfactory. In fact, I have bought bees off and on for 15 years, and do not know that I ever have purchased a nicer colony at the time of year, or for such a moderate price. . . . I found the queen readily. The bees were very gentle, not one offering to sting. So I fancy I have a gentle strain—just what I wanted. Now I thank you very much for giving me a good colony for so small a price, and for packing them so that they could be opened up so readily. . . . If any one wants recommendation, refer to me."

Address, **T. H. KLOER,**
426 Willow St., TERRE HAUTE, IND.
20Atf Mention the American Bee Journal.

Sections & Foundation Reduced.

I am now selling Root's best polished **SECTIONS** at \$2.50 per 1,000; 2,000 for \$4.50; 3,000, \$6.45; 5,000, \$10.00. **The New Weed Process Comb Foundation** reduced 3c. per pound. See prices on page 14 of our Catalogue, or The A. I. Root Co.'s.

M. H. HUNT,
19D4t BELL BRANCH, MICH.
Mention the American Bee Journal.

Cheapest, 1st-Class, 60 cents

Smoker, 2-inch fire-pot, bent nose, and all the new improvements—a genuine Bingham. Has pleased every one for 15 years. Per mail, 60 cts. **T. F. Bingham, Farwell, Mich.**
23Ctf Mention the American Bee Journal.

New England Supply Depot!

You can get the most complete Bee-Hive, also other Supplies, at—**H. ALLEY'S,**
Room 5, 82 Water St., - BOSTON, MASS.
13Dtf Mention the American Bee Journal.

W. H. BRIGHT'S

CIRCULAR FOR 1896, describes everything needed in the apiary. Bees, Queens, Hives, Sections, Spraying Pumps, and Bright's Comb Foundation, sold at bottom prices. Send for one free.

Wm. H. BRIGHT,
17D4t MAZEPPA, MINN.
Mention the American Bee Journal.

Hives & Combs For Sale.

45 10-frame Langstroth Hives, two-story, for extracting, as made and sold by T. G. Newman. These are empty—no frames—are well painted, and have been kept in the bee-house. Price, 75 cents each.

Also, 400 Brood or Extracting Combs for the above hives; they have the triangular top-bar as made by Newman. They are clean and in good condition. Price, \$15.00 per 100. I would take \$85.00 for the whole lot of Hives and Combs.

Reference—American Bee Journal.
W. C. LYMAN,
20Atf DOWNER'S GROVE, ILL.
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

MUTH'S HONEY EXTRACTOR PERFECTION Cold-Blast Smokers.

Square Glass Honey Jars, Etc.
For Circulars, apply to **CHAS. F. MUTH & SON,**
Cor. Freeman & Central Aves., Cincinnati, O.
Send 10c for Practical Hints to Bee-Keepers.
Mention the American Bee Journal.

Bee-Keeper's Guide—see page 333.

PERSONAL MENTION.

MR. F. A. GEMMILL, of Stratford, Ont.—the Assistant Foul Brood Inspector—reported on May 12 the loss of only one colony of bees; and that the prospects were bright for a good crop of honey in his locality this year. We hope all his anticipations may be turned into realizations.

MR. I. J. STRINGHAM, of New York City, is one of our regular bee-supply advertisers. In a letter dated May 6, he reports having had the best trade, so far, of any year since he has been in the supply business. We are glad to hear this. To our mind, it only proves that if one expects to build up a good trade, he must keep his name and business before the public all the time.

EDITOR LEAHY, of the Progressive Bee-Keeper, said in the May number of that paper, that "The supply business has been exceedingly good. We have not shut down a day, except Christmas, since the middle of last November." This is just what we would expect a firm to say that advertises liberally and regularly. The Leahy Mfg. Co. know how to advertise profitably. Irregular, haphazard advertising never can bring permanent results.

DR. C. C. MILLER, of Marengo, Ill., called on us last week when on his way to Champaign, Ill., where he went as a delegate to the 38th annual convention of the Illinois State Sunday School Association. The Doctor was feeling tip-top, and said that without stretching the truth a bit, the past 8 or 9 months had been the most promising for bee-keeping in this part of the country in his 35 years' experience, and his 150 colonies, in three apiaries, were never in better condition. He expects a fair crop of honey this season, even should there be no more rain the next six weeks; and should the favoring showers come, he anticipates a large crop. After having had two complete failures in succession, he will be able to appreciate a good crop.

MR. THOS. G. NEWMAN AND FAMILY reached San Diego, Calif., all right, we are glad to be able to say. In a personal letter, dated May 4, Mr. Newman wrote us:

FRIEND YORK:—The climate here is delightful, flowers plentiful, and people agreeable. I was sick in bed for two days while crossing the mountains, with hard cold and neuralgia. All the rest are well as usual, except Mrs. Newman, who is accompanied by her old malady—erysipelas. We hope now for an improvement.

On the sleeper the next to me was a bee-keeper who entered into conversation soon after starting. He was en route for California, said that San Diego county is the best in the world for honey. He talked of the bee-periodicals and bee-books. Stated his preferences very emphatically, and admired the Bee-Keepers' Union and its Manager. This was too much for me. I begged him to stop, saying if he knew that he was talking to the person he was talking about, he might wish he hadn't said so much. But even then he persisted—held out his

hand and said, "Shake again; I am so glad we have met."

We had a very pleasant journey when I was able to be sitting up.

Before I got to San Diego, Mr. W. D. French, of Foster, Calif. (well known to the readers of the Bee Journal as an able and progressive bee-keeper), came to see me, but had to leave before I arrived, but left four letters of introduction to the Mayor, banker, and two business men. The people are very cordial and kind.

At Los Angeles I met many old friends. Some met us with bouquets of flowers at the station, and then got up a banquet at the American Legion of Honor Hall; and showed us the city from every point, in carriage rides.

At San Diego Dr. Peebles was waiting with two carriages at the station, and entertained us at luncheon.

We are all delighted with this land of sunshine and flowers.

Yours fraternally,
THOS. G. NEWMAN.

MR. GUS DITTMER, of Augusta, Wis., is one of the comb foundation specialists of this country. Some time ago he wrote us that he had "come to stay," and considered himself established in the business. He attributes most of his success to a small advertisement that he has kept running continuously in the American Bee Journal for nearly two years. By fair and square dealing, in connection with judicious advertising, a man in a business that is useful, can hardly help succeeding. Success, of course, in these days, comes slowly, but it does come to those who deserve it, in almost every case.

Queens and Queen-Rearing.

If you want to know how to have queens fertilized in upper stories while the old queen is still laying below; how you may safely introduce any queen, at any time of the year when bees can fly; all about the different races of bees; all about shipping queens, queen-cages, candy for queen-cages, etc.; all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know—send for Doolittle's "Scientific Queen-Rearing"—a book of over 170 pages, which is as interesting as a story. Here are some good offers of this book:

Bound in cloth, postpaid, \$1.00; or clubbed with the BEE JOURNAL for one year—both for only \$1.75; or given free as a premium for sending us three new subscribers to the BEE JOURNAL for a year at \$1.00 each.

Bee-Keepers' Photograph.—We have now on hand a limited number of excellent photographs of prominent bee-keepers—a number of pictures on one card. The likeness of 49 of them are shown on one of the photographs, and 121 on the other. We will send them, postpaid, for 50 cents each, mailing from the 121 kind first; then after they are all gone, we will send the 49 kind. So those who order first will get the most "faces" for their money. Send orders to the Bee Journal office.

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Spacing Brood-Frames—The Bee-Space.

Query 14.—1. Is $1\frac{1}{2}$ inches preferable to $1\frac{3}{4}$ for brood-frames?
2. Has $\frac{1}{4}$ inch for bee-space superseded the old idea of $\frac{3}{8}$?—AMATEUR.

E. France—1. No. 2. Not as I know of.

Chas. Dadant & Son—1. We prefer $1\frac{1}{2}$.

C. H. Dibbern—1. Yes. 2. I prefer $5/16$ inch.

G. M. Doolittle—1. I prefer $1\frac{1}{2}$. 2. I use $5/16$.

H. D. Cutting—1. Yes. 2. $5/16$ is a good "bee-space."

W. G. Larrabee—1. I prefer $1\frac{1}{2}$ from center to center. 2. No.

James A. Stone—1. I prefer $1\frac{1}{2}$. 2. No, not for me (in all cases).

Mrs. L. Harrison—1. No. 2. Not with me. I prefer $\frac{3}{8}$ scant. Say $5/16$.

Emerson T. Abbott—1. I make my frames $1\frac{1}{2}$ inches wide. 2. It has with me.

Prof. A. J. Cook—1. I think not. 2. It should be between the two to be just right.

Dr. C. C. Miller—1. It is generally, but I don't feel entirely sure about it. 2. Yes.

J. M. Hambaugh—1. For all purposes $1\frac{1}{2}$ inches from center to center. 2. I don't know.

Allen Pringle—1. No. 2. I don't know what others use, but anywhere from $\frac{1}{4}$ to $\frac{3}{8}$ will do.

Dr. J. P. H. Brown—1. I make mine $1\frac{7}{16}$ inches. 2. I don't think it has. From $\frac{1}{4}$ to $\frac{3}{8}$ is right.

W. R. Graham—1. I prefer scant $1\frac{1}{2}$ inches from center to center. 2. $\frac{1}{4}$ inch bee-space is all I want.

R. L. Taylor—1. Yes. 2. I think not. It has been known all along that $\frac{1}{4}$ inch is the better, if it could be certainly kept at that size.

B. Taylor—1. I use $1\frac{1}{2}$, but I am not sure but $1\frac{1}{2}$ would be better, as it would give room for larger clusters of bees between the combs in winter. 2. It has with me.

J. E. Pond—1. I do not care to use brood-frames over one inch in width. 2. Space the frames "bee-space" apart; that is, so that a bee can just work easily between the frames.

P. H. Elwood—1. The majority of bee-keepers favor the $1\frac{1}{2}$ inch. I do not know. 2. I have never had an older idea than $\frac{1}{4}$ inch. I think the $\frac{3}{8}$ -inch idea is the newer and (in one sense) shallower idea.

Eugene Secor—1. $1\frac{1}{2}$ to $1\frac{3}{4}$ inches from center to center is near enough for practical purposes. 2. A bee-space is slightly less than $\frac{1}{4}$, but the latter will do well enough, and unless they are crowded for room, bees will seldom build comb in a $\frac{3}{8}$ space.

Rev. M. Mahin—1. The difference is so small as to be practically unimportant.

I find that when bees build comb in box-hives that they do not space them as accurately. Some are $1\frac{1}{2}$ inches apart, some a little less, and some a little more. 2. I aim to have the bee-space $\frac{1}{4}$ inch. I do not know what others do.

G. W. Demaree—1. I infer you ask about proper spacing of brood-frames. I have worked a good many hives with the frames spaced $1\frac{1}{2}$ from center to center, and a great many more $1\frac{1}{2}$ from center to center of the frames. I prefer the $1\frac{1}{2}$ spacing. 2. I prefer $5/16$ for the "bee-space."

\$3.00 Worth for \$2.00 !

Until further notice, we propose to give you a chance to get some good reading-matter for the long winter evenings, at half price.

Send us \$2.00, and we will mail you your choice of \$2.00 worth of the following booklets, and also credit your subscription to the American Bee Journal for one year:

Poultry for Market and Profit.....	25c
Our Poultry Doctor.....	30c
Turkeys for Market and Profit.....	25c
Capons and Caponizing.....	30c
Rural Life.....	25c
Preparation of Honey for the Market.....	10c
Bee-Pasturage a Necessity.....	10c
Hive 1 Use, by Doolittle.....	5c
Foul Brood, by Dr. Howard.....	25c
Foul Brood, by Kohnke.....	25c
Foul Brood, by Cheshire.....	10c
Bee-Keeping for Profit, by Dr. Tinker.....	25c
Kendall's Horse-Book—Eng. or German.....	25c
Silo and Silage, by Prof. Cook.....	25c
Hand-Book of Health, by Dr. Foote.....	25c
Maple Sugar and the Sugar Bush.....	35c
Potato Culture, by Terry.....	40c
Carp Culture, by Root & Finney.....	40c
Strawberry Culture, by Terry & Root.....	40c
Bienen Kultur, by Newman [German].....	40c
Winter Problem in Bee-Keeping [Pierce].....	50c
Bee-Keepers' Directory, by Henry Alley.....	50c
Advanced Bee-Culture, by Hutchinson.....	50c
5 Honey as Food and Medicine.....	25c

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

Book Clubbing Offers.

(Read Carefully.)

The following clubbing prices include the American Bee Journal one year with each book named. Remember, that only ONE book can be taken in each case with the Bee Journal a year at the prices named. If more books are wanted, see postpaid prices given with the description of the books on page 303. Following is the clubbing-list:

1. Langstroth on the Honey-Bee.....	\$2.00
2. A B C of Bee-Culture.....	2.00
3. Bee-Keeper's Guide.....	1.75
4. Bees and Honey [Cloth bound].....	1.65
5. Scientific Queen-Rearing.....	1.75
6. Dr. Howard's Foul Brood Book.....	1.10
7. Advanced Bee-Culture.....	1.30
8. Amerikanische Bienenzucht [Germ.].....	1.75
9. Bienen-Kultur [German].....	1.25
10. Rational Bee-Keeping [Cloth bound].....	2.00
11. Rational Bee-Keeping [Paper bound].....	1.75
12. Thirty Years Among the Bees.....	1.30
13. Bee-Keeping for Profit.....	1.15
14. Convention Hand-Book.....	1.15
15. Poultry for Market and Profit.....	1.10
16. Turkeys for Market and Profit.....	1.10
17. Capons and Caponizing.....	1.10
18. Our Poultry Doctor.....	1.10
19. Green's Four Books.....	1.15
20. Green's Six Books on Fruit-Culture.....	1.15
21. Garden and Orchard.....	1.15
22. Rural Life.....	1.10
23. Emerson Binder for the Bee Journal.....	1.60
24. Commercial Calculator, No. 1.....	1.25
25. Commercial Calculator, No. 2.....	1.40
26. Kendall's Horse-Book.....	1.10
27. Strawberry Culture.....	1.20
28. Potato Culture.....	1.20
29. Carp Culture.....	1.20
30. Hand-Book of Health.....	1.10
31. Dictionary of Apiculture.....	1.35
32. Maple Sugar and the Sugar Bush.....	1.20
33. Silo and Silage.....	1.10
34. Winter Problem in Bee-Keeping.....	1.30
35. Apiary Register (for 50 colonies).....	1.75
36. Apiary Register (for 100 colonies).....	2.00
37. Bee-Keepers' Directory.....	1.30

Honey & Beeswax Market Quotations.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, and, so far as possible, quotations, are made according to these rules:

FANCY.—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain, or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1 dark," etc.

CHICAGO, ILL., May 16.—We quote: Fancy white, 15c.; No. 1 white, 12@13c.; fancy amber, 9@10c.; No. 1 amber, 7@8c.; fancy dark, 8@9c.; No. 1 dark, 7c. Extracted, white, 5@7c.; amber, 4@5c.; dark, 4@4½c. Beeswax, 30c. The number of sales are few, and prices are really nominal. The only activity shown is in a little fancy comb and beeswax.

R. A. B. & Co.

PHILADELPHIA, PA., Apr. 22.—We quote: No. 1 white, 9@10c.; fancy amber, 8@9c.; fancy dark, 7@8c. Extracted, white clover, 10c.; amber, 5@5½c.; dark, 4@4½c. Beeswax, 25@26c. Comb honey is dull. Extracted in fair demand. Beeswax lower. W. A. S.

BUFFALO, N. Y., Apr. 20.—We quote: Fancy white, 15@16c.; No. 1 white, 13@14c.; fancy dark, 8@9c.; No. 1 dark, 7@7½c. Beeswax, 25@28c. Trade very dull and honey not moving, except a few fancy lots; anything dark is hard to sell. B. & Co.

CINCINNATI, O., Apr. 22.—There is no fancy white comb honey on our market. Best white sells at 12@14c. in a jobbing way, with a fair demand. Demand is good for extracted at 4@7c., according to quality.

Beeswax is in good demand at 25@30c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, MO., May 9.—We quote: No. 1 white, 13c.; No. 1 amber, 11c.; No. 1 dark, 8c. Extracted, white, 6c.; amber, 5c.; dark, 4c. Beeswax, 25c. C. C. C. & Co.

NEW YORK, N. Y., May 9.—There is some demand for white comb honey at unchanged prices. No market for buckwheat. Extracted remains quiet. New Southern is now arriving and selling at 5@6c. for fine grades and 50@55c. a gallon for fair to common. Beeswax easy at 28@29c. H. B. & S.

List of Honey and Beeswax Dealers.

Most of whom Quote in this Journal.

Chicago, Ills.

R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

HILDRETH BROS. & SEGELKEN,
120 & 132 West Broadway.

CHAS. ISRAEL & BROS., 486 Canal St.

Kansas City, Mo.

C. C. CLEMOMS & Co., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

1896 **SAVE MONEY** 1896

If you want first-class **ITALIAN QUEENS** FOR BUSINESS, Foundation at Wholesale Prices, Hives, suited for the South, or SUPPLIES, send for Price-List—to

J. P. H. BROWN, AUGUSTA, GA.

Bottom Prices

**BRING US BIG TRADE.
GOOD GOODS KEEP IT.**

If you want the best supplies that can be made at a little less cost than you can buy the same goods for elsewhere, write to us for low prices. 1896 Catalogue now ready—ask for it and a free copy of **The American Bee-Keeper** (36 pages).

Address,
THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

Mention the American Bee Journal.

COMB FOUNDATION!

Wax always wanted for Cash or in Exchange for Fdn. or other Supplies. My trade is established on **Low Prices** and the merit of my **Foundation**. Orders filled promptly.
WORKING WAX INTO FDN. BY THE LB. A SPECIALTY. Wholesale prices to dealers and large consumers. Send for Prices and Samples to—**GUS DITTMER, AUGUSTA, WIS.**
Reference—Augusta Bank. 1 Atf

Mention the American Bee Journal.

ROOTS **GOODS** **Prices Reduced** on Dovetail Hives and Sections. A full line of Apian Supplies in stock to fill orders promptly at lowest prices for Best Goods. 36-page Catalogue Free.
JNO. NEBEL & SON, High Hill, Mo.
Mention the American Bee Journal. 4A26t

I ARISE



TO SAY to the readers of the **BEE JOURNAL** that **DOOLITTLE**

has concluded to sell **BEES and QUEENS** in their season, during 1896, at the following prices:

One Colony of Italians on 9 Gallup frames, in light shipping-box \$6.00
Five Colonies..... 25.00
Ten Colonies..... 45.00
1 untested queen. 1.00
6 " queens 5.50
12 " " 10.00
1 tested Queen... \$1.50
3 " Queens. 3.50
1 select tested queen 2.00
3 " " Queens 4.00

Select tested queen, previous season's rearing. 4.00
Extra Selected for breeding. THE VERY BEST. 5.00
About a Pound of BEES in a Two-frame Nucleus, with any Queen, \$2.00 extra.

✓ Circular free, giving full particulars regarding the Bees and each class of Queens.
Address

G. M. DOOLITTLE,

12A25t **BORODINO, Onon. Co., N. Y.**
Mention the American Bee Journal.

BEES **QUEENS**
Smokers, Sections, Comb Foundation, And all Apian Supplies cheap. Send for FREE catalogue. **E. T. FLANAGAN, Belleville, Ill.**
6A26t Please mention the Bee Journal.

PURE BARRED PLYMOUTH ROCK

Eggs, \$1.25 per 14. Our P. Rocks are very large, with fine plumage. Also,

BLACK MINORCA EGGS,

a non-sitting and great laying breed. Both kinds raised upon our farm. Minorca Cockereis, \$1.00 each. **Mrs. L. C. AXTELL,**
16Atf **ROSEVILLE, Warren Co., ILL.**

Mention the American Bee Journal.

19th Year Dadant's Foundation 19th Year

Is still in the lead, for we use all the latest improvements, including the

NEW WEED PROCESS,

and still make the best goods. Remember that we do not use any acid to purify our beeswax, and that is why our Foundation preserves the smell of the honey and is more acceptable to the bees, than any other. It is kept for sale by

T. H. Strickler, Solomon City, Kansas.
G. K. Hubbard, Fort Wayne, Ind.
L. Hanssen, Davenport, Iowa.
C. Theilmann, Theilmanton, Minn.
E. C. Eaglesfield, Berlin, Wis.
E. T. Abbott, St. Joseph, Mo.
J. M. Jenkins, Wetumpka, Alabama
John Key, East Saginaw, Mich.
Vickery Bros., Evansville, Ind.

The Jennie Atchley Company, Beeville, Texas.
C. F. Muth & Son, Cincinnati, Ohio
E. Kretschmer, Red Oak, Iowa.
G. B. Lewis Co., Watertown, Wis.
James Reynolds Elevator Co., Poughkeepsie, N. Y.
Louisiana Bee-Keepers' Supply Manufactory, Donaldsonville, La.
Page & Lyon, New London, Wis.
John Nebel & Son, High Hill, Mo.

and many other Dealers. All agree in saying that no goods are better than ours.

Those of our customers who formerly bought through Thos. G. Newman can get our Foundation in **Chicago, Ill.**, by addressing us at **118 Michigan Street**. We keep no other goods there.

We make a specialty of **Veils and Veil Stuffs** of best quality, cotton and silk.

"LANGSTROTH ON THE HONEY-BEE"—Revised.

Bee-Keepers' Supplies, Smokers, Sections, Tin Pails, etc.
Samples of Foundation and Tulle FREE with Circular. Instructions to beginners with Circular. Send us your address.

CHAS. DADANT & SON,

Mention the American Bee Journal.

HAMILTON, Hancock Co., ILL.

25c Cash Paid for Beeswax!

For all the good, pure yellow **BEESWAX** delivered to our office till further notice, we will pay 25 cents per pound, cash; or 28 cents for whatever part is exchanged for the American Bee Journal, Books or Seed, that we offer. If you want **cash promptly** for wax, send it on at once. Dark or impure wax not taken at any price. Address plainly,

George W. York & Co., 118 Michigan St., Chicago, Ill.

Lower Prices on Sections & Foundation

Improved facilities, increased output, and competition, together with hard times, tend to lower prices.

Root's No. 1 White Extra-Polished Sections

are superlative in quality, and are now offered for a short time at the following special prices for 4½x4½ any stock width: **1000, \$2.50; 2000, \$4.50; 3000, \$6.45; 5000, \$10.00.**

Cream Sections of such widths as we have in stock at 25c per 1000 less than the white.

The New Weed Process Comb Foundation

is superior to all others in every way, showing, from recent tests in Florida, five times greater resistance to sagging, making it possible to use a lighter grade with more feet to the pound, with greater safety than with the old process. Owing to decline in wax we reduce price of Foundation **3 cts.** a pound. Prices now are:

	Price per lb. in lots of 1 lb.	10 lbs.	25 lbs.	50 lbs.
Heavy or Medium Brood Foundation.....	44c	43c	42c	40c
Light Brood.....	47c	46c	45c	43c
Thin Surplus.....	54c	53c	52c	50c
Extra-Thin Surplus.....	59c	58c	57c	55c

Lower prices on 100-lb. lots, and dealers supplied at special prices.

These wholesale dealers who handle Root's Goods in carload lots unite with us in above prices:

Walter S. Powder, Indianapolis, Ind.; John Nebel & Son, High Hill, Mo.
Joseph Nysewander, Des Moines, Iowa; Wm. A. Selser, Philadelphia, Pa.
M. H. Hunt, Bell Branch, Wayne Co., Mich.; Geo. E. Hilton, Fremont, Mich.

THE A. I. ROOT CO., MEDINA, OHIO.

118 Michigan St., Chicago, Ill.

1024 Mississippi St., St. Paul, Minn.

Syracuse, N. Y.

Mechanic's Falls, Maine.